HUMAN AD

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Heliprops

Anger: *How to Control a Killer Emotion*

Anger can run the spectrum from mild irritation to rage, and rage is a form of temporary insanity. None of us can think or act effectively if we are angry. If pilots are both hurried and mad, their engine(s) may take them directly to the scene of the crash. Anger is a perfectly normal human emotion. It is an adaptive survival response to threats and danger that helps us defend ourselves. It becomes a problem when it becomes inappropriate, prolonged, excessive, or out of control. Prehistoric man needed to develop a storm of anger to fight fiercely with a cave bear or saber-tooth tiger. But, he calmed down a few minutes after the fight ended (either calm or dead). His anger released a surge of adrenaline, preparing him for fight-or-flight. His blood pressure went up, blood was diverted to his muscles, blood clotted easier. The Neanderthal became a formidable fighting machine—but for an appropriate time only.

Contrast this with present-day man—not unlike Homo sapiens aeronauticus—who may get road rage and then stay angry for hours after the traffic incident (perceived as a personal insult) has long passed. He or she may stay mad at a boss, spouse, or even a frustrating situation for days, even weeks. Some people stay in an almost perpetual state of anger, with simmering irritation just waiting to explode.

All anger results from some sort of frustration with other people or even external events such as assembling an "easy-to-assemble" appliance or waiting in line or struggling to loosen a rusted nut and bolt. One thing is certain: Angry people have a low tolerance for frustration.

> ***"Our Chief Pilot is a very even-tempered person. He's always mad."***

The natural response to frustration is anger. Here's the problem though: How much of it is normal or appropriate? Do we stay mad all morning because our car keys are lost? Does a rude sales person merit ruining an hour or so of your time? You can't lash out at everyone who irritates or inconveniences you. Throwing a lamp through the front window is extreme; being sarcastic or sulking is a milder form of the same thing.

We are each born with certain largely unchangeable personalities. Some of us are laid-back and calm; others bristle easily, have a "short fuse." Our undesirable traits—such as proneness to anger—can (and must) be controlled to a degree. Do you express the same degree of anger to the president of your company as you do to a subordinate? So, you really have some degree of control. You don't scream at the boss.

Here's an almost fatal example of the toll anger can take: An airline captain, who was known for his violent temper, was making a tricky approach in marginal weather and was off on his heading and altitude. The first officer was afraid to say anything until just before the situation became dangerous. In other

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words, he was not as fearful of a controlled flight into terrain as he was of incurring the fury and explosive tongue of his captain.

An angry pilot– even a mildly irritated one– is prone to make procedural errors. After several maddening delays at home one morning, a corporate pilot made four "procedural errors" driving to the airport. He overshot his regular turn, pulled in front of another motorist, was driving way too fast, and spilled hot coffee in his lap. Luckily, he calmed down before climbing into a Citation. Life is full of natural frustrations. Life is not easy. There will always be pain, loss, injustice, and disagreements. If this frustration load leads to excessive or prolonged anger, two things can occur: The anger can be directed outward in the form of irritability or aggression; or it can be directed inward, resulting in fatigue and depression. In fact, long-standing unresolved anger is the main cause of being tired and depressed. It raises havoc with our general health.

In July 1997, the Beth Israel Deaconess Medical Center at Harvard Medical School reported that "anger is the affective state associated with myocardial ischemia [lack of blood flow to the heart muscle] and life-threatening arrhythmias [irregular heart rhythms], with at least 36,000 (2.4% of 1.5 million) heart attacks precipitated by anger in the United States [yearly]." Blowing up over something minor could put you in the hospital—or the morgue.

If you think you feel steamed most of the time, or if your anger is often out of control and you don't know why, make an appointment with a competent psychotherapist who deals in anger management. The cost may be the same as a new set of tires for your car plus a new transmission. But, it may be the most important thing you will ever do for your marriage, job, health—or your life. More than 90 percent of success in life is getting along with people (find what they like and do more of it; find what they don't like and do less of it). No one enjoys being around someone who is—much of the time—cynical, demanding, suspicious, defensive, and hostile. Understanding what triggers your anger will take a lot of time and motivation. Controlling your anger is as important as controlling your aircraft. After all, you didn't get to be a hotshot pilot overnight. ***Be cool.***

Tips from a psychotherapist who specializes in anger control. First, what doesn't help? "Letting it all blow" is a myth. It is like throwing gasoline on a fire. Conversely, holding lots of anger in (suppressing it) for a long time does lots of havoc with your mood—and blood pressure.

Of course, meditation, counting to ten, deep breathing, exercise, visualizing happy scenes and experiences, or yoga all may help some. But these recommendations are in all anger-management articles—things to do when you are already mad, but hardly able to think rationally. Use them, but remember what you really want to know is how to keep from letting crippling anger get started in the first place.

The bottom line is learning how to prevent excessive and unreasonable anger, dangerous anger. Learn your own anger pattern so that you can prevent smoldering anger or blow-ups.

What gets you angry? How do you handle it? Is anger a big problem in your life?

Anger-prone people often feel they deserve special consideration from others and become highly irritated when they don't get it. Respect yourself, be assertive— but not aggressive. Talk to an offending person when you are both calm and in a reasonably good mood. Say something like, "Chris, I like you and think you really can teach me a lot, but every day you seem to put me down, and I don't hear anything positive about what I am doing. I go home tired and discouraged. What can we do to work things out?" Go on from here. (One woman did and then got fired, but her next job was sheer pleasure and she got $11,000 more a year.) Nothing works all the time.

Healthful anger is OK. Just try to be objective and say how you feel about things. Calmly let others know what your needs are. Realize that no one ever wins a power struggle.

You can't always help being around obnoxious people, but you can control how you react to them. You are the boss of your emotions and responses.

Absolutely best of all: Try to avoid things that get you steamed. Try to identify, when you are calm and rational, the things that make you angry, and plan what you can do to avoid or control them. For instance, leave earlier for your job, and go home later if traffic drives you nuts. Better to spend the time at work than on the expressway. Devise strategies to avoid nasty people and frustrating situations as much as you reasonably can.

Ask yourself, "Is this frustration enough to ruin my whole day, even an hour?"

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Note: The views and recommendations made in this article are those of the author and not necessarily those of the Federal Aviation Administration.
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There I Was...

Here are accounts submitted to us by readers.

Fuel, Fuel, Everywhere, but not a drop…

I am not an experienced pilot, am helicopter rated only, and would not fly myself to any sort of important event. I feel that would put too much on my mind. So I hired a charter pilot to fly me and my friend in a Cessna 172.

Flight was to be from Nelspruit, South Africa to Johannesburg and back. We would overfly several airports en route.

I knew and had confidence in this charter pilot.

On the return flight I asked if I could make the takeoff. After I did so, I gave the controls back to the charter pilot telling him that the rest was up to him.

We were on an IFR flight plan.

We had not been in any hurry. We had plenty of time to get to our destination in time for my business meeting and then back. I did not apply any pressure on the charter pilot on how to plan and conduct this flight.

Weather en route and at destination was not a factor.

En route I pointed out what I thought was a low fuel state. The charter pilot indicated that we should have enough fuel to get there.

As it approached nightfall I again indicated my uneasiness with the fuel situation, but the charter pilot elected to continue, passing airports where fuel could have been obtained.

It was dark when we were nearing our final destination.

I noticed that we were in a powered descent, and the throttle was full forward.

The lights of the destination airport were in sight about 5 nautical miles out, when the engine quit due to fuel exhaustion.

Although there were few lights on the ground beneath us, we knew that there was a ridgeline in front of us. I told the charter pilot to turn away from the ridgeline and hope that we would be able to find a better place to land (crash).

The landing light was useless as we were descending. It was only just before impact that the light was effective, but then it was too late. The first impact was on the undercarriage into a 70 foot tree top. Then a full stall and as gentle a descent as one can make into trees at night.

I was thrown forward and received cuts on my forehead that produced more blood than the severity of the wound warranted. I remained conscious and had full control of all of my faculties.

The charter pilot and I each were able to get out of the aircraft. He through the door, and me through a window that somehow I had the strength to kick out. I'm convinced that under normal circumstances I would not have been able to do that.

Unfortunately my friend in the back seat could not move from her waist down, and was unable to get out of the aircraft on her own.

While I held my friend up by holding her under her arms from behind, I directed the charter pilot to use my cell phone and to get help.

For being in a remote location in South Africa, we got help in an amazingly short time – about 1.5 hours later we were in hospital.

The next day my sore shoulder muscles reminded me that holding up my friend from the time of the crash until we were rescued was another effort that was beyond my normal strength.

We had tried to make a 4.5 hour flight with 4.25 hours of fuel in spite of 2 opportunities to fill up. The unanswered question was, "Why?"

Close Call

This was a military training flight in a Hughes 500 type helicopter. This was the second flight of the day for this helicopter. I was in the right seat providing training for the Student Pilot with me, and was the lead of a flight of four helicopters. It was a training mission with simulated firing on targets. I was in the lead helicopter, with the other three helicopters in formation trailing to my left rear. The formation came to a hover approximately 100 feet above a narrow ravine with very steep sides in the Jurea Desert. The formation was facing down the ravine. We had maintained the formation hover position for a short time. We had a slight tailwind. It was my responsibility to check the flying of the other three helicopters, so I separated from the formation and flew over to the lip of the ravine. I made a left pedal turn, having to work the pedals as I turned crosswind and then into the wind, so I could look back at the formation of the other three helicopters. I came into a hover about 40 feet above the edge of the lip of the ravine I heard a BANG, followed

There I was … pg. 3 cont'd.

immediately by the helicopter descending and yawing to the left. From that 40 foot hover the Rotor RPM bled off and the landing was quite firm. Later we saw that it spread the skids. That was the least of my worries. After we landed, the helicopter began to slide down toward the edge of the ravine. We were very lucky that the skids wedged on some rocks that kept us from going over the edge.

The forced landing was caused by a sudden and total failure of the main drive shaft. The Engine RPM went up, and the Rotor RPM came down. The overspeed system brought the engine RPM back down. After we stopped the slide we very carefully got out of the helicopter to avoid shaking it loose from the rocks. Had this failure occurred a few seconds earlier, or the helicopter not caught on the rocks, we could easily have ended this ride down at the bottom of the ravine.

Of course, in the few seconds from the BANG till the aircraft stopped moving, I had no time to say anything to the Student Pilot. I did however, quickly get out a Mayday.

After the accident I noticed my back muscles were tight, perhaps from the impact or perhaps from the tension.

UH-1 Tail Rotor Failure

"I was operating a UH-1 on rescue operations in Chiapas State in Mexico after heavy rains caused terrible flooding. I had been involved with this operation for 24 days, sometimes flying as much as 8 hours per day. Other helicopters were operating near the coast and I was in the mountains. It had been me, a mechanic, and a person who helped with the navigation who had been retained by the State to deliver food, water, clothing, blankets and anything else that we could carry that would help. We also carried people to various places such as hospitals. We would, when we could, go to Tuxla for fuel. At other times we would establish our own refueling point by carrying and placing our own fuel in cans at various locations so we could operate more efficiently without having to go back to an airport after every flight. This was a remote location with few roads other than footpaths, and almost no ground communication facilities. Weather at times was a problem – winds, low clouds, and rain. Some missions were directed by the State, but many were simply targets of opportunity that we came across during our flights.

On this final flight we were going back to Vera Cruz. We were in cruise about 1,500 feet, nine miles from the airport, calm wind.

First there was a strong, rapid lateral vibration. At first I thought it could be wind gusts pushing the aircraft. Then the helicopter yawed right, and pitched down about 20 degrees. I lowered the collective and stepped on the pedals. But the pedals were loose and there was no response to my inputs. RPM

There I Was… pg. 4 cont'd.

was OK. NR was still in the green. The mechanic was asking "What happened?" I raised the collective some, resulting in more right yaw. I followed the right yaw by a banked turn, maybe 15-20 right roll. I kept the airspeed up. The aircraft had very strong vibrations. The navigator said "Have faith!" I never quit. I kept shouting "No!" My thoughts were that I would not allow this helicopter to crash and kill us. My crew supported me saying they had faith that I could do it. I recall having some anger that we were so high and that it would take a long time to get down. The aircraft kept yawing and I kept following the yaw with a right turn. I kept the airspeed up. Approaching the ground the airspeed was still high. I made a yawing flare – some of it was a pitch flare, some of it was a roll flare. The terrain was flat, but there were trees everywhere – no open areas. As I reached the top of the flare I rolled the throttle off and leveled the helicopter just as we entered the tops of the trees. The rotor blades hit a lot of trees and the aircraft shifted around but remained upright. We were tossed around. We were all wearing helmets and the navigator and I were OK. The crew chief hit the pedestal and seats with his head. His helmet prevented any significant injury, and perhaps saved his life.

After everything came to a stop and we realized we were all right, I had this overwhelming sense of relief. But I also had this feeling of pride that "Now I am a real pilot – I handled a major problem and didn't hurt anybody."

YOUR ANSWERS. . . . .

In the last issue we asked What checklists do you use? Which charts do you use? What format are the checklists in, and how do you handle them?" Here are some of your answers.

Human AD.

Remember, these are unedited, and in most cases anonymous, responses. We do not publish all of the responses we receive. Those selected will, in our opinion, stimulate thought, provide some different ideas, and generally show the spectrum of thinking resident in the operational world. Part of the rationale is to show that there are perceptions, assumptions, and expectations held by operational helicopter pilots that may be inaccurate, incomplete, or simply wrong. Our standing advice is to be careful in reading the answers to our questions. They may be wrong!

"We operate from camps in the mountain west. The pilot uses a preflight checklist affixed to a knee board. The list is numbered. A copilot may read the list to the pilot.

When the list has been completed the list is placed in the cockpit and the back side of the list – the engine start list is displayed. Then the engine is started and the helicopter prepared for flite. A safety checklist is given to each passenger and the passenger is asked if there are any questions. The critical points are explained to the passenger.

There is a shutdown list. A part of the shut down is a check of the machine for items that might preclude flite the following day.

We regard the checklists as very important."

"I use a written checklist for pre-start checks on a new type, until I become familiar enough to do it from memory."

"We have a OH-58A+ and use the standard military checklist with a few changes for the items we added – i.e. FLIR and Nightsun.

Try to use call and respond. Aircraft are part of the Sheriff's Department."

"Walk around with daily A.D. on 47's and look for oil that is not supposed to be there. Frayed cables, oil in T.R. Box. The best thing is if someone is around is to tell them what you are looking for – loose bolts, frayed cables, cracks in legs and skids, gas that keeps dripping after drainage. Then thereafter they may catch something you did not. I am a 21 year veteran of crop care."

"We operate several different helicopters including two that are not Bells. We utilize the factory checklists for prestart, engine start, and before takeoff primarily. In one of our aircraft, we took the factory checklists and reduced them by eliminating all the discussion items (engine start considerations, parameters, warnings) without eliminating or reducing the steps required originally. We were able to have all the acceptance, prestart, engine start, pretakeoff, prelanding checklists on one side of an 8.5 x 11 piece of paper,

which we laminated for durability. This "brief" checklist is much easier to pick up and use, and was easily approved by our FSDO."

"Yes. Checklist used; made for each aircraft; preflight, before start, starting, run-up procedures, shut down, trained to use them. Often not used when in a hurry."

"(1) All aircraft – Normal, Emergency, Functional Flight Checklists.

(2) World Class, ISO 9002 documents prepared/revised by the Service Bureau.

(3) Challenge and Response, or Do-List."

"I'm a Bell 212 type pilot in the SAR service in Spain.

Due to the specialty of this job and the equipment used, we have modified the typical Bell Textron checklist for the Bell 212 IFR model. In the "Before Takeoff," "After Takeoff," Before Landing," and "Before Approach (to a boat)" checklists we have included checks for FLIR, marine GPS, radar, and special SAR configurations like rescue hoist, doors, rescue man, etc.

The crew is formed of two pilots, rescue man, and hoist operator. …we use the Flight Safety checklist for starting and emergency procedures modified with items for SAR equipment.

And we use two more checklists, one for briefing and the other for debriefing. The one is for planning, and the other one to know what we did wrong."

"About the only charts I look at in my operation are the power assurance and hover charts."

"We use the –10 operators manual checklist for military aircraft. They are a challenge/response format and are used for every start and/or flight. This is the only authorized checklist in the military (Army Guard) and is mandatory to use. Keep you from doing embarrassing (mostly) or dangerous things"

"The one for the aircraft – use before, during, and after each flight."

One responder who reported *"We totally believe in checklists"*, sent us copies of his 206B and 206L Preflight Checklists, as well as his 206B and 206L Engine Pre-Start Checklists, Engine Starting Checklists, Engine Run-Up Checklists, In Flight & Before Landing Checklists, and Engine Shut Down Checklists.

Each of these checklists are abbreviated checklists modified from the Rotorcraft Flight Manual Checklists.

He has some interesting modifications such as including reference to pertinent maintenance data, reminders to check for the presence/validity of the aircraft's and pilot's certificates, and a comment to seek maintenance help if anything does not look right, because *"You can't fix it in the air."*

As expected, the written responses we received were mainly from operators who have and (at times) use their checklists. The readers who responded apparently viewed the use of a checklist as being helpful, by physically referring directly to some written procedures. Consequently, only two written responses indicated that when they become familiar with the aircraft they rely on the checklist committed to memory. A checklist is no less of a checklist if it is committed to memory. We

recognize that many pilots use the manufacturer's checklist published in the Rotorcraft Flight Manual, but it is from memory rather than directly from a written page.

In addition to the written responses we gathered comments from many pilots who had attended training at the BHTI Customer Training Academy. From all of the input we gathered we are confident of the following remarks concerning typical helicopter operations:

- Most line pilots do not physically hold and refer directly to a written checklist.
- The use of written checklists is related to the complexity of the aircraft. Pilots of simple aircraft like an A-Star or JetRanger generally use the checklist in their memory. Pilots of more complex aircraft like an S-76 or 412 are more likely to refer directly to a written checklist.
- Preflight exterior checks vary. A preflight check of an unfamiliar aircraft will be more comprehensive, and more in accordance with the Rotorcraft Flight Manual, than on a familiar aircraft. Essentially all pilots perform some sort of an exterior check – fluid levels, tie-downs removed, cowls latched, etc. The items checked are what the pilot considers important.
- It is not uncommon (regardless of the complexity of the aircraft, and regardless if the checklist comes from memory or directly from a written card) to abbreviate their procedures, particularly on the second and subsequent flights of the day. The rationale appears to be (1) all of the detailed systems checks are not required, and (2) their operational situation does not allow the time.
- Pilots who fly more than one type of helicopter are more likely to use checklists to avoid confusing one procedure with another.
- The use of checklists is influenced by company policy or by the regulations under which they operate.
- Experienced pilots who fly simple helicopters solo are not convinced that physically referring to a written checklist is superior to referring to a memorized checklist. Referring to a written checklist, they claim, can be a distraction, or shift the focus of attention and thought from the items to be checked to the words on the checklist.

Can the manufacturer's Rotorcraft Flight Manual checklists be modified?

YES, to recognize special equipment, crew members, mission, and operational situations.

Is the use of a checklist mandatory?

- **If operating under certain Federal Aviation Regulations such as Parts 135 and 121, *YES.***
- **If operating under Part 91, *NO.***
- **If taking an FAA check ride, *YES, if you want to pass.***
- **If your company requires it, *YES.***

Do pilots deviate from their checklists?

Unintentionally?

OF COURSE. Simply providing the crew with a complete list of the items to be checked and accomplished does not insure that there will be no errors.

Distractions, interruptions and failure of short term memory have caused experienced, professional crews to omit, mis-configure, or forget critical items.

Intentionally?

YES. A pilot may choose to intentionally omit certain items on a checklist. A checklist that does not contemplate the nature of the missions or the operational situations; and/or a checklist that is deemed to be excessively long and detailed will provoke a pilot to purposely deviate. Intentional deviations are often a result of the pilot losing confidence in the checklists because they do not fit well in his situation.

For these, and other reasons, pilots intentionally and unintentionally deviate from their checklist procedures. At times these deviations result in serious errors. That pilots make errors when using checklists is not sufficient reason to abandon the creation of, and encourage the use of, checklists. It should, however, be the reason to recognize that a checklist is more than an exhaustive list of items that the crew is required to follow to properly configure and operate the aircraft systems.

Before a checklist is written, several factors should be considered: the company policies, the crew, the missions, the operational tempo/situation/resources, and of course the aircraft systems and cockpit layout. A well designed checklist will tend to remove the traps and temptations for unintentional and intentional errors.

WHAT'S YOUR ANSWER ?

QUESTION:

Is "Fatigue" an issue in your operations? What are the primary causes, and how do you counteract them?

_____

_____

_____

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_____

Mail your ANSWERS to:

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The primary objective of the HELIPROPS program and the ***HUMAN AD*** is to help reduce human error related accidents. This newsletter stresses professionalism, safety and good aeronautical decision-making.

Letters with constructive comments and suggestions are invited. Correspondents should provide name, address and telephone number to:

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